Name: _____

ASM Tuition Academy

Equation of a Line

Instructions:

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided
  - there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all you're working out.**

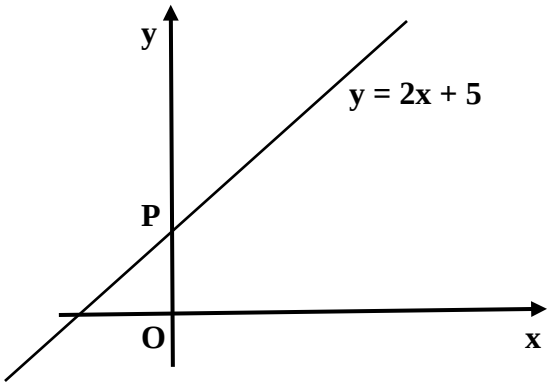
Information:

- The marks for each question are shown in brackets
  - use this as a guide as to how much time to spend on each question.

Advice:

- Read each question carefully before you start to answer it.
- Keep an eye on time.
- Try to answer every question.
- Check your answers if you have time at the end.

1.



a) The line y = 2x + 5 crosses the y axis at P.
What is the value of y at P?

_____

b) Write down the equation of another line which is parallel to y = 2x + 5

_____

(Total for question 1 is 2 marks)

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2. A line passes through the point (0, 5)
The gradient of this line is 3.
Write down the equation of this line.

_____

(Total for question 2 is 2 marks)

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3. A line passes through the point (0, -6).
The gradient of this line is 2.
Write down the equation of this line.

_____

(Total for question 3 is 2 marks)

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4. A straight line has equation $y = 4 – 2x$

a) Write down the gradient of the line.

_____

b) Write down the coordinates of the point where the line crosses the y-axis.

_____

(Total for question 4 is 2 marks)

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5. A straight line has equation $y = 4x – 1$

a) Write down the gradient of the line.

_____

b) Write down the coordinates of the point where the line crosses the y-axis.

_____

(Total for question 5 is 2 marks)

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6. A straight line has equation $y = 8 – x$

a) Write down the gradient of the line.

_____

b) Write down the coordinates of the point where the line crosses the y-axis.

_____

(Total for question 6 is 2 marks)

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7. A straight line has equation $y = 5x + 4$

a) Write down the gradient of the line.

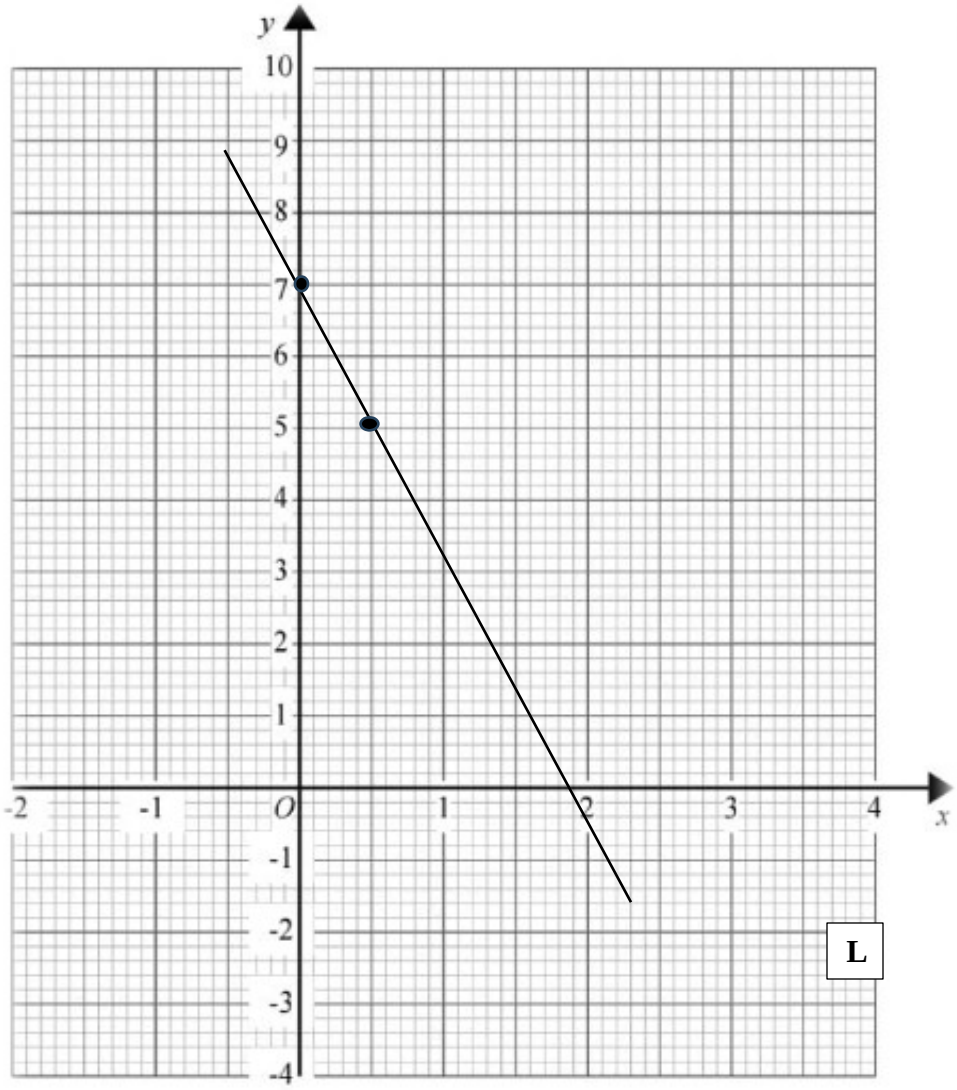
_____

b) Write down the coordinates of the point where the line crosses the y-axis.

_____

(Total for question 7 is 2 marks)

8.



Find the equation of the line L.

(Total for question 8 is 3 marks)

9. A straight line has equation $3y - 9x = 6$

a) Work out the gradient of this line.

_____

b) Write down the equation of a line parallel to this line.

_____

(Total for question 9 is 3 marks)

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10. A straight line has equation $2y - 5x = 8$

a) Work out the gradient of this line.

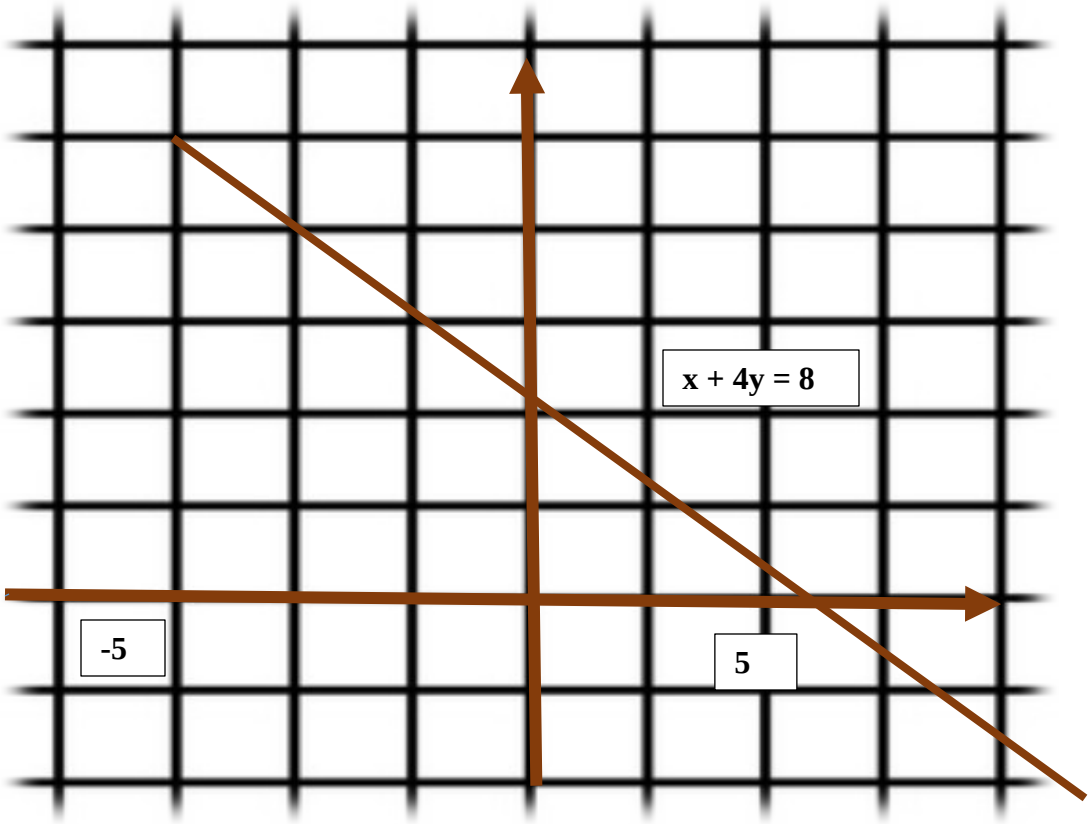
_____

b) Write down the equation of a line parallel to this line.

_____

(Total for question 10 is 2 marks)

11. The line with equation x + 4y = 8 has been drawn on the grid.



a) Rearrange the equation x + 4y = 8 to make y the subject.

_____

b) Write down the gradient of the line with equation x + 4y = 8

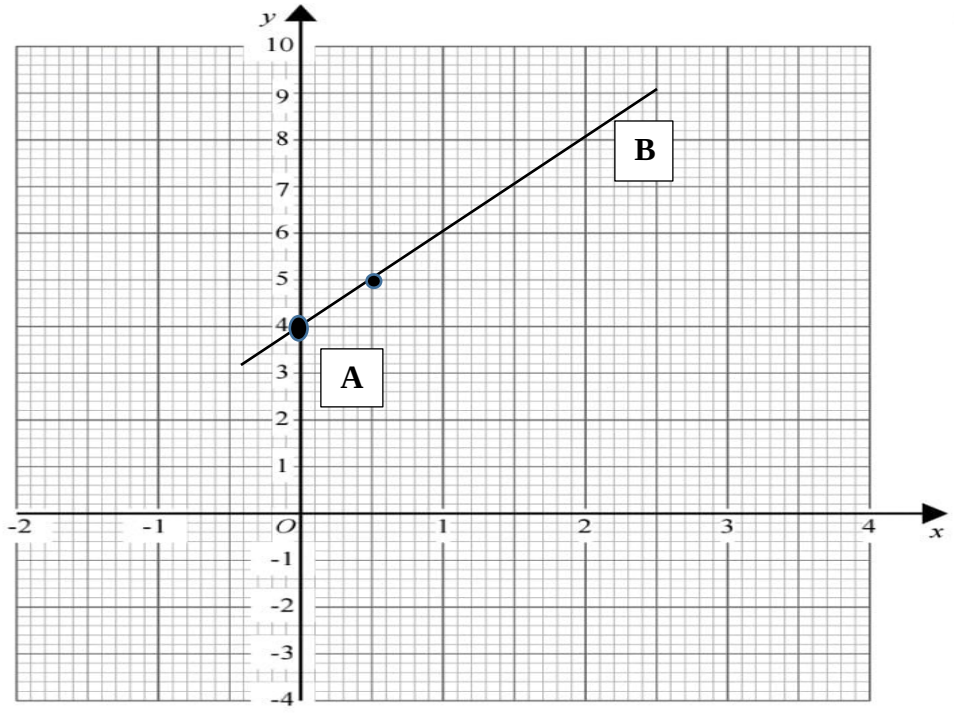
_____

c) Write down the equation of the line which is parallel to the line with equation x + 4y = 8 and passes through the point with coordinates (0, 5).

_____

(Total for question 11 is 5 marks)

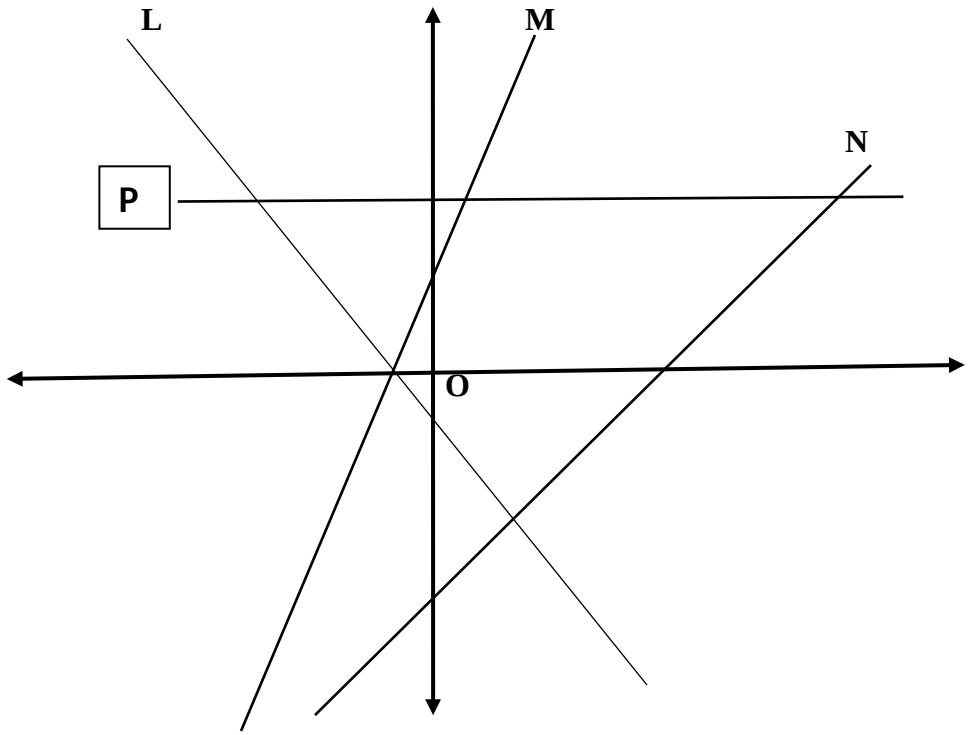
12.



Find the equation of the line that passes through A and B.

(Total for question 12 is 3 marks)

13.



The diagram shows 3 straight lines, labelled L, M and N,
The equations of the straight lines are:

A: $y = 2x + 1$

B: $y = x – 3$

C: $y = -2x -1$

D: $y = 2$

Match each straight line, L, M, N and P to its equation.
Complete the table.

Equation	A	B	C	D
Straight line				

(Total for question 13 is 2 marks)